SANTA CLARA VALLEY WATER DISTRICT

SECOND ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT REPORT FOR REACH 6 OF THE UPPER GUADALUPE RIVER FLOOD PROTECTION PROJECT

March 2009

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SANTA CLARA VALLEY WATER DISTRICT

SECOND ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT REPORT FOR REACH 6 OF THE UPPER GUADALUPE RIVER FLOOD PROTECTION PROJECT

EVALUATION OF AN IMPROVED CHANNEL MODIFICATION ALTERNATIVE AND ASSOCIATED PROJECT DESIGN CHANGES

PROJECT NO. 26154002

Prepared by

David W. Dunlap
Senior Environmental Planner

Under the direction of

Debra Caldon
Environmental Planning Unit Manager

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

MARCH 26, 2009

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Biological Resources and Wetland Assessment, Upper Guadalupe River, Reach 6, Upper Guadalupe River Flood Protection Project, San Jose, Santa Clara County, California, January 23, 2009.

1. BACKGROUND

Existing Environmental Documentation and Permit Conditions

This Addendum amends the already-certified Final Environmental Impact Report (1999 FEIR)[1] of the Upper Guadalupe River Flood Protection Project (UGRFPP), formerly known as the Upper Guadalupe River Flood Control Project. Specifically, it addresses changed activities and potential impacts to biological resources and aesthetics that could result from changes in project design.

The approved UGRFPP was to have constructed a flood bypass channel and bridge improvements (collectively, the Bypass) in various reaches of the river, including Reach 6. However the newly-selected design alternative, a natural floodplain design, will be constructed in Reach 6 instead.

The new design addresses the Regional Water Quality Control Board (RWQCB) Order[2] that calls for consideration of an Improved Channel Modification Alternative (ICMA). This Addendum has been prepared to discuss, and document, new information specific to the ICMA and the potential environmental impacts of ICMA-related activities.

The Reach 6 ICMA is similar in design to an alternative considered in the UGRFPP's feasibility analysis. That alternative was referred to in the 1999 FEIR as the Fluvial Geomorphological Alternative (FGA). It was *"eliminated from further consideration because: (1) the cost of construction would be high, (2) savings in maintenance costs would be minimal, (3) substantial impacts to habitats in Reaches 6-12, especially jurisdictional wetlands, would occur, and (4) the [National Marine Fisheries Service] has indicated that this alternative would affect fisheries much more than the Preferred Project…".* The Preferred Project being, at that time, the UGRFPP.

The ICMA is a hybrid design, combining characteristics of the UGRFPP and the FGA. The ICMA design addresses the factors that led to the elimination of the FGA at the time of the 1999 FEIR, and incorporates design elements that satisfy the RWQCB's permit-related Findings and Provisions. The Project also has the support of interest-based groups such as the Guadalupe Watershed Integration Working Group (GWIWG)[3] seeking adoption of a design that will be considered more geomorphically- and environmentally sensitive, from a long term perspective. Further details about the environmental setting can be found in the FEIR cited above.

2. California Environmental Quality Act (CEQA) Considerations

Once the CEQA review for a project has been conducted and the lead agency has adopted its Findings with respect to impacts and proposed mitigations, these decisions need no additional review per CEQA. The lead agency's role has been fulfilled unless there are changes to the project and further actions are necessary that involve the exercise of the lead agency's discretion regarding the project.[4]

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[1] Board Resolution No. 2001-51, August 15, 2001; Resolution No. 2001-51 Adopting Certain Findings For Flood Control Work On Guadalupe River From Highway 101 to Interstate 880 and Interstate 280 to Blossom Hill Road, certifying the Final Environmental Impact Report/Environmental Impact Statement for the Upper Guadalupe River Flood Control Project, November 1999.

[2] Order R2-2003-0115, Waste Discharge Requirements and Water Quality Certification, December 16, 2003; Provision 32.

[3] The GWIWG is composed of representatives of state and federal regulatory agencies, local districts, and organizations, including: California Department of Fish and Game, San Francisco Bay Regional Water Quality Control Board, National Marine Fisheries Service, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, the Guadalupe-Coyote Resource Conservation District, Santa Clara Valley Water District, and the Natural Heritage Institute.

As the lead agency for the ICMA in Reach 6, the Santa Clara Valley Water District (SCVWD) has re-evaluated the UGRFPP in light of changes in project design: changes stemming from the RWQCB's Order. This Addendum details the locations and methods by which the ICMA will be carried out, and allows evaluation of impacts not possible at the time of the FEIR. The changes result in no new impacts nor increase the severity of previously-identified impacts to a level of significance.

Furthermore, the design modifications do not change the Findings or the Mitigation Monitoring and Reporting Program (called a Mitigation Monitoring Plan in the FEIR) adopted by the SCVWD Board with certification of the FEIR. Best Management Practices (BMPs)[5] have been incorporated into the ICMA design (see Attachment A).

3. DESCRIPTION OF PROPOSED ACTION

This Addendum revises the 1999 FEIR to include a natural floodplain alternative called the ICMA. Core characteristics of this alternative are presented in the subsections below. The ICMA falls completely within the footprint of the approved Bypass project, and amends the Bypass project design, described in the final 1999 FEIR, in the following ways:

- The extent and characteristics of channel modification (i.e., broad, floodplain channel versus a narrower and deeper, armored bypass channel);
- Reduced hardscaping (e.g., armoring) of the channel and banks;
- Bridge construction (e.g., culvert-type versus column-supported);
- Additional floodplain connections; and
- Additional riparian vegetation removed to create floodplain connections.

Location of the Project

The ICMA component of the UGRFPP will be located in San Jose, County of Santa Clara, California. It will lie within the Guadalupe River corridor between Interstate Highway 280 (I-280) and Blossom Hill Road; and, specifically, will range from the point at which the river passes under I-280 to a point upstream (south) near the Union Pacific Railroad (UPRR) crossing, (see Figures 1 and 2). The length of the ICMA will be approximately 2,500 feet. All activities will occur within the area defined by the original project, see Figure 1.

The project limits for the ICMA are the same as for the bypass channel design alternative. All activities will be conducted within the active area identified for the Bypass project.

Objectives of the Project

The main objectives of the ICMA are to:

- Provide flood protection to at least a 100-year level for the surrounding areas;
- Provide long-term benefits to stream ecology, hydrology, wildlife, and fisheries;
- Reduce erosion and enhance water quality; and
- Allow for potential, continuous, creek-side trail access.

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[4] CEQA Guidelines §15162

[5] Best Management Practices (BMP) Handbook, (District ISO document W751M01 Rev B, January 13, 2009).

The ICMA's objectives will be achieved primarily by creation of:

- A 2:1 (horizontal : vertical) slope of the east bank of the widened channel, to an approximate 15-foot cut below existing ground, thereby increasing flood capacity;
- A grassy floodplain with incidental brush growth; and,
- A proposed series of eight 5- to 8-foot-high islands between the natural channel and the widened channel, each having outboard slopes of 3:1.

The main purpose of the islands is to retain as much of the existing native riparian vegetation within the existing channel as practical. Approximately 750 feet of the total channel length in the project area, about 35%, will consist of these islands and low-lying, re-vegetation benches along the lower part of the east bank of the existing channel, where there currently are areas that lack tree canopy. These lowered benches will be designed so that they will be lower than the 15-foot cut.

Based on current measurements there will be about 200 feet of these lowered benches, with widths of approximately ten feet. The design objective of these lowered benches is to create natural low-level areas where alluvial soils could develop, improving the wicking ability of the soil for plants, increasing survivorship of both planted and naturally-recruited plants, especially shade-producing trees.

4. IMPACT ANALYSIS

Activities and Potential Impacts

As a result of design differences, ICMA construction-phase activities, and associated impacts, differ in some respects from those of the already-approved Bypass. As was the case with the SCVWD Board-certified Bypass project, the ICMA could involve: *a)* potential, long-term, but temporary, impacts to vegetation and wildlife habitat, due primarily to clearing and grubbing of the active project area; and, large-scale excavation, soil grading and compaction; and, *b)* temporary aesthetic impacts from large-scale landscape manipulation.

Both operational and maintenance frequency for the ICMA are expected to be reduced compared with the already-approved Bypass project due to the nature of a wider channel for the ICMA, allowing the geomorphically-balanced low-flow channel to evolve through time and impeded less by hydraulic constraints and controls. Construction-, operations-, and maintenance methods will be consistent with those evaluated in the 1999 FEIR, except as discussed below.

Additionally, time-related changes in the project area, with respect to biological resources, have occurred since certification of the 1999 EIR/EIS. Therefore, as requested by California Department of Fish and Game (CDFG), a baseline re-evaluation of biological resources was carried out, focusing on *a)* a comparative evaluation of vegetation type and distribution (i.e., re-mapping); *b)* habitat utilization by wildlife, especially avian species; and *c)* a characterization of fisheries resources.[6] Also, the design of the ICMA will result in impact changes to Visual/Aesthetic Resources, especially during construction and in the near term thereafter. See more in-depth discussion, below. Therefore, FEIR sections 4.12 (Vegetation), 4.13 (Wildlife), 4.14 (Fisheries), and 4.15 (Visual/Aesthetic Resources) are revised to incorporate ICMA activities, and changes to the impacts resulting from those activities.

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[6] Biological Resources and Wetland Assessment Upper Guadalupe River, Reach 6, Upper Guadalupe River Flood Protection Project, San Jose, Santa Clara County, California, January 23, 2009.

Insert Figure 1 Location of the Project Site

Insert Figure 2. Aerial Site Map

Changed Conditions and Attending Severity of Impacts

The following is a summary, by FEIR Section number, of important changes and potential impacts identified in the analysis of activities and impacts. More detailed information relating to baseline biological resources and potential impacts that could result from implementation of the ICMA is presented in the *Biological Resources and Wetland Assessment Upper Guadalupe River, Reach 6, Upper Guadalupe River Flood Protection Project, San Jose, Santa Clara County, California.* January 23, 2009 (see Attachment B).

FEIR Section 4.12 – Vegetation

Implementation of the ICMA will not significantly adversely affect any special-status plant species. Avoidance of impacts, to the extent practicable, via designed retention of existing vegetation, as well as implementation of a re-vegetation plan, will be carried out. Additionally, implementation of the ICMA will maintain the site's vegetative integrity largely by: 1) replacing non-native vegetation with native vegetation; 2) expanding the woody, vegetated area eastward above the existing top-of-bank in some areas; and, 3) retention of riparian-forest bank and islands. The impacts will be greater, in some instances, than with the SCVWD Board-certified Bypass (see Table 1), but not significantly so, because: a) SCVWD standard BMPs will be applied and the ICMA design itself offers a greater probability of long-term habitat improvement (owing primarily to gradual development of a riparian corridor and urban forest comprised of more native species); b) already-adopted mitigation measures still will be applicable; and, c) no new mitigation measures will be necessary.

Table 1. Impact Acreage By Habitat Type

HAB ITAT TYPE	BYPASS ALTERNATIVE (Acres)	IMPROVED CHANNEL MODIFICATION ALTERNATIVE (Acres)
Riparian Forest	0.02	1.05
Urban Forest	3.93	2.03
Ruderal Scrub	0.05	0.03
Ruderal Herbaceous	0.08	5.16
Upland Landscaping	0.24	0.28
Wetlands	0.002	<0.01
Other Waters	0.17	0.10

Source: Biological Resources and Wetland Assessment Upper Guadalupe River, Reach 6, Upper Guadalupe River Flood Protection Project, San Jose, Santa Clara County, California, January 23, 2009.

FEIR Section 4.13 – Wildlife

Implementation of the ICMA will not significantly adversely affect any special-status wildlife species. The ICMA will maintain the integrity of wildlife habitat adjacent to construction areas, to the extent practicable, largely by: 1) replacing non-native vegetation with native vegetation; 2) expanding the woody, vegetated area eastward above the existing top-of-bank in some areas; 3) retention of riparian-forest bank and islands; and 4) targeted oak plantings. All appropriate SCVWD-standard BMPs protective of wildlife and habitat resources will be applied. The impacts likely will be greater than with the SCVWD Board-certified Bypass, but not significantly so, because: a) SCVWD standard BMPs will be applied and the ICMA design itself offers a greater probability of long-term habitat improvement (owing primarily to gradual development of a riparian corridor and urban forest comprised of more native species); b) already-adopted mitigation measures still are applicable; and, c) no new mitigation measures will be necessary.

FEIR Section 4.14 – Fisheries

Implementation of the ICMA will not significantly adversely affect any special-status fisheries resources. The ICMA will result in impacts to Shaded Riverine Aquatic (SRA) habitat, more than would occur with the Bypass, mostly due to the loss of riparian vegetation. However, considerable retention of riparian vegetation will be achieved in design via avoidance and island creation. Also, SRA losses largely will be temporary, albeit long-term, until establishment and maturation of replacement plantings. The impacts will be greater than with the SCVWD Board-certified Bypass, but not significantly so, because: a) SCVWD standard BMPs will be applied and the ICMA design itself offers a greater probability of long-term habitat improvement (owing primarily to gradual development of a riparian corridor and urban forest comprised of more native species); b) already-adopted mitigation measures still will be applicable; and, c) no new mitigation measures will be necessary.

FEIR Section 4.15 – Visual/Aesthetic Resources

Temporary, construction-phase visual quality will be affected by the ICMA; the project likely will have an impact on the urban scenic vista (i.e., riparian corridor); and, the existing visual character of the site will be altered. The impacts likely will be greater than with the SCVWD Board-certified Bypass, but not significantly so, because: a) SCVWD standard BMPs will be applied and the ICMA design itself offers a greater probability of long-term aesthetic improvement (owing primarily to gradual development of a riparian corridor and urban forest comprised of more native species); b) already-adopted mitigation measures still will be applicable; and, c) no new mitigation measures will be necessary.

5. CONCLUSION REGARDING APPROPRIATE LEVEL OF REVIEW

The ICMA project will fall completely within the footprint of the approved Bypass project, and will amend the Bypass project design as described in the 1999 FEIR in the following ways:

- The extent and characteristics of channel modification (i.e., broad, floodplain channel versus a narrower and deeper, armored bypass channel);
- Reduced hardscaping (e.g., armoring) of the channel and banks;
- Bridge construction (e.g., culvert-type versus column-supported);
- Additional floodplain connections; and
- Additional riparian vegetation removed to create floodplain connections.

Analysis indicates that none of the conditions specified in CEQA Guidelines §15162(a),[7] will occur with implementation of the ICMA; activities associated with the ICMA will not create new, significant environmental impacts, nor increase the severity of impacts beyond the level of significance identified in the certified FEIR; and, no new mitigation measures or changes in the Mitigation Monitoring and Reporting Program are proposed. Additionally, consistent with CEQA Guidelines §15162(b),[7] inasmuch as the ICMA involves changes in the project, the SCVWD determined the need to prepare this Addendum.

In conclusion, based on the evidence in the whole record, including the 1999 FEIR and technical information supporting the information presented herein, this Addendum has been prepared in fulfillment of the requirements of §15164(a).[7]

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[7] California Code of Regulations Title 14, Natural Resources, Division 6, Resources Agency, Chapter 3. Guidelines for Implementation of the California Environmental Quality Act, Article 11, Types of EIRs.

ATTACHMENT A

Best Management Practices Incorporated into the Improved Channel Modification Alternative for Reach 6 of the Upper Guadalupe River Flood Protection Project

AIR QUALITY

AQ-1 *BAY AREA AIR QUALITY MANAGEMENT DISTRICT OPTIONAL DUST CONTROL MEASURES* **(Individual Optional control measures may be incorporated, as appropriate)**	Implement appropriate Bay Area Air Quality Management District (BAAQMD) Optional Control Measures for construction emissions of PM_{10} at all construction sites. BAAQMD Optional Control Measures are strongly encouraged at construction sites that are large in area, located near sensitive receptors, or which for any other reason may warrant additional emissions reductions. Current measures stipulated by the BAAQMD CEQA Guidelines include the following (BAAQMD 1999): 1. Active areas shall be watered at least twice per day unless soils are already sufficiently moist to avoid dust. The amount of water must be controlled so that runoff from the site does not occur, yet dust control is achieved. 2. Trucks hauling soil, sand, and other loose materials shall be covered or shall maintain at least two feet of freeboard. 3. Unpaved access roads, parking areas and staging areas at construction sites shall be paved, watered three times daily, or non-toxic soil stabilizers shall be applied to control dust generation. 4. Paved site access roads, parking areas, and staging areas shall be swept daily (with vacuum-powered street sweepers). 5. Paved public streets shall be swept (with vacuum-powered street sweepers) if visible soil material is carried onto adjacent paved surfaces.
AQ-2 *BAY AREA AIR QUALITY MANAGEMENT DISTRICT ENHANCED DUST CONTROL MEASURES (SITES GREATER THAN 4 ACRES IN SIZE)*	For sites greater than four acres in size, implement Bay Area Air Quality Management District Enhanced Dust Control Measures. Current measures stipulated by the BAAQMD CEQA Guidelines include the following (BAAQMD 1999): 1. All BAAQMD "Basic" control measures. 2. Inactive areas (previously graded areas inactive for ten days or more) shall be sprayed with soil stabilizer or seeded. 3. Exposed stockpiles (dirt, sand, etc.) shall be watered twice daily, enclosed, covered, or sprayed with soil stabilizers. 4. Traffic speeds on unpaved roads shall be limited to 15 mph. 5. Sandbags or other bank protections shall be installed to prevent silt runoff to roadways. 6. Vegetation in disturbed areas shall be replanted as soon as horticulturally appropriate. For example, plant material may not be ready as soon as the job is done (e.g. willow cuttings have to be collected during winter dormancy).

AQ-3 *BAY AREA AIR QUALITY MANAGEMENT DISTRICT OPTIONAL DUST CONTROL MEASURES* **(Individual optional control measures may be incorporated, as appropriate)**	Implement appropriate Bay Area Air Quality Management District (BAAQMD) Optional Control Measures for construction emissions of PM_{10} at all construction sites. BAAQMD Optional Control Measures are strongly encouraged at construction sites that are large in area, located near sensitive receptors, or which for any other reason may warrant additional emissions reductions. Current measures stipulated by the BAAQMD CEQA Guidelines include the following (BAAQMD 1999): 1. Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site. 2. Install wind breaks or plant trees/vegetation wind breaks at windward side(s) of construction areas. 3. Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph. 4. Limit the area subject to excavation, grading, and other construction activity at any one time. Additional District control measures that may be used if applicable include: 5. Tailgates of trucks shall be sealed; and 6. Trucks shall be brushed down before leaving the site.

BIOLOGICAL RESOURCES

BI-11 *MIGRATORY BIRD SURVEYS*	Migratory bird surveys will be performed prior to any project-related activity that could pose the potential to affect migratory birds. Inactive bird nests may be removed, with the exception of raptor nests. No birds, nests with eggs, or nests with hatchlings shall be disturbed.

CULTURAL RESOURCES

CU-2 *ARCHAEOLOGICAL FINDS*	Work in areas where archaeological artifacts are found will be restricted or stopped until proper protocols are met. Work at the location of the find will halt immediately within 30 feet of the find. A Consulting Archaeologist will visit the discovery site as soon as practicable for identification and evaluation pursuant to §21083.2 of the Public Resources Code and §15126.4 of the California Code of Regulations. If the archaeologist determines that the artifact is not significant, construction may resume. If the archaeologist determines that the artifact is significant, the archaeologist will determine if the artifact can be avoided and, if so, will detail avoidance procedures. If the artifact cannot be avoided, the archaeologist will develop within 48 hours an Action Plan which will include provisions to minimize impacts and, if required, a Data Recovery Plan for recovery of artifacts in accordance with Public Resources Code §21083.2 and §15126.4 of the CEQA Guidelines.
CU-3 *BURIAL FINDS*	Work in areas where any burial site is found will be restricted or stopped until proper protocols are met. Upon discovering any burial site as evidenced by human skeletal remains, the County Coroner will be immediately notified. No further excavation or disturbance within 30 feet of the site or any nearby area reasonably suspected to overlie adjacent remains may be made except as authorized by the County Coroner, California Native American Heritage Commission, and/or the County Coordinator of Indian Affairs.

GRADING AND EXCAVATION BMP SUITE

AQ-1	Bay Area Air Quality Management District Basic Dust Control Measures (all const. sites)
AQ-2	Bay Area Air Quality Management District Enhanced Dust Control Measures (sites greater than 4 acres in size)
AQ-3	Bay Area Air Quality Management District Optional Dust Control Measures
AQ-4	Avoid Stockpiling Potentially Odorous Materials
BI-2	Salvage Native Aquatic Vertebrates
BI-3	Salmonid Protection by In-Channel Work Timing
BI-4	Minimize Waterway Access Impacts
BI-5	Remove Temporary Fills as Appropriate
BI-8	Migratory Bird Surveys
BI-9	Migratory Bird Nesting Prevention - Vegetation Clearing
BI-10	Migratory Bird Nesting Exclusion Devices
CU-1	Review of Projects with Native Soil
CU-2	Archaeological Finds
CU-3	Burial Finds
HM-9	Vehicle and Equipment Cleaning
HM-10	Vehicle and Equipment Fueling
HM-11	Vehicle and Equipment Maintenance
HM-12	Hazardous Materials Management
HM-13	Spill Prevention
HM-14	Spill Kit Location
HM-15	Avoid Exposing Soils with High Mercury Levels
WQ-1	Conduct Work from Top of Bank
WQ-2	Use of Wheel and Track Mounted Vehicles in Stream Bottoms
WQ-4	Handle Sediments so as to Minimize Water Quality Impacts
WQ-5	Soil Stockpiles
WQ-6	Stabilized Construction Entrance
WQ-11	Tidal Work Areas
WQ-12	Diversion/ Bypass Water at Non-tidal Sites
WQ-14	Seeding
WQ-15	Groundwater Management
WQ-18	Site Maintenance and Cleanup
WQ-26	Silt Fence Culvert Entrance Protection
WQ-29	Discharge Storm Drain Curb & Drop Inlet Protection
WQ-40	Water Pollution Control
WQ-41	Stormwater Pollution Prevention
NO-1	Noise Pollution
NO-2	Residential Noise Management
TR-1	Public Safety Measures
UT-1	Sanitary/Septic Waste Management

WATER QUALITY AND HAZARDOUS MATERIALS

HM-12 *HAZARDOUS MATERIALS MANAGEMENT*	Measures shall be implemented to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means: 1. Prior to entering the work site, all field personnel shall know how to respond when toxic materials are discovered. 2. The discharge of any hazardous or non-hazardous waste as defined in Division 2, Subdivision 1, Chapter 2 of the California Code of Regulations shall be conducted in accordance with applicable State and federal regulations.
HM-13 *SPILL PREVENTION*	Prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water: 1. Field personnel shall be appropriately trained in spill prevention, hazardous material control, and clean-up of accidental spills. 2. No fueling, repair, cleaning, maintenance, or vehicle washing shall be performed in a creek channel or in areas at the top of a channel bank that may flow into a creek channel.
HM-14 *SPILL KIT LOCATION*	Spill prevention kits shall always be in close proximity when using hazardous materials (e.g., crew trucks and other logical locations): 1. Prior to entering the work site, all field personnel shall know the location of spill kits on crew trucks and at other locations within District facilities. 2. All field personnel shall be advised of these locations and trained in their appropriate use.
HM-15 *AVOID EXPOSING SOILS WITH HIGH MERCURY LEVELS*	To ensure worker safety is protected in areas with elevated mercury concentrations in exposed surfaces, personal protective equipment will be required during project construction to maintain exposure below levels established by the California Division of Occupational Safety and Health (Cal/OSHA).

HYDROLOGY / WATER QUALITY

WQ-1 *CONDUCT WORK FROM TOP OF BANK*	For minor work activities that will occur in the channel, work will be conducted from the top of the bank if access is available and there are flows in the channel.
WQ-2 *USE OF WHEEL AND TRACK MOUNTED VEHICLES IN STREAM BOTTOMS*	Field personnel will use the appropriate equipment for the job that minimizes disturbance to the stream bottom. Appropriately-tired vehicles, either tracked or wheeled, will be used depending on the situation. Tracked vehicles (bulldozers, loaders) may cause scarification. Wheeled vehicles may cause compaction. Heavy equipment will not operate in the live stream.
WQ-4	Sediments shall be stored and transported in a manner that minimizes water quality impacts:

HANDLE SEDIMENTS SO AS TO MINIMIZE WATER QUALITY IMPACTS	1. Wet sediments may be stockpiled outside of a live stream or may be stockpiled within a dewatered stream so water can drain or evaporate before removal. 2. This measure applies to saturated, not damp, sediments and depends upon the availability of a stockpile site. 3. For those stockpiles located outside the channel, water draining from them will not be allowed to flow back into the creek or into local storm drains that enter the creek, unless water quality protection measures recommended by the RWQCB are implemented. 4. Trucks may be lined with an impervious material (e.g. plastic), or the tail gate blocked with dry dirt or hay bales, for example, or trucks may drain excess water by slightly tilting their loads and allowing the water to drain out. 5. Water shall not drain directly into channels (outside of the work area) or onto public streets without providing water quality control measures. 6. Streets shall be cleared of mud and/or dirt by street sweeping (with a vacuum-powered street sweeper), as necessary, and not by hosing down the street.
WQ-5 *SOIL STOCKPILES*	If soil is to be stockpiled, no run-off shall be allowed to flow to a creek.
WQ-6 *STABILIZED CONSTRUCTION ENTRANCE*	Measures will be implemented to minimize soil from being tracked onto streets near work sites: 1. Methods used to prevent mud from being tracked out of work sites onto roadways include installing a layer of geotextile mat, followed by a 4-inch thick layer of 1 to 3-inch diameter gravel on unsurfaced access roads. 2. Access will be provided as close to the work area as possible, using existing ramps where available and planning work site access so as to minimize disturbance to the water body bed and banks, and the surrounding land uses.
WQ-7 *PREVENT EROSION DOWNSTREAM OF BANK PROTECTION SITES*	Increased water velocity at work sites may increase erosion downstream. Project design will assess hydraulic effects immediately upstream and downstream of the work area. If the hardscape revetment would cause significant increase in erosion potential, downstream energy dissipation features such as pools or grade control structures will be considered in the design. If the evaluation identifies possible downstream impacts, proactive protection of these areas will be provided. Such measures include, but are not limited to, appropriately keyed-in coir logs, riparian enhancement planting, strategic placement of rock, and flow deflectors.
WQ-12 *DIVERSION/ BYPASS WATER AT NON-TIDAL SITES*	When work in a flowing stream is unavoidable, the entire streamflow will be diverted around the work area by a barrier. Construction of the barrier will normally begin in the upstream area and continue in a downstream direction, and the flow will be diverted only when construction of the diversion is completed. The water diversion plan will allow stream flows to gravity flow around or through the work site using temporary culverts or stream flow is pumped around the work site using pumps and screened intake hoses. Coffer dam construction will be

	adequate to prevent seepage into or from the work area. Coffer dams will be constructed of river run gravel with a fines content that is less than 15%. Fines are defined as material that is able to pass through a #20 sieve. Coffer dams may also be constructed of sheet piles, inflatable dams, or sand bags. Coffer dams will be installed both upstream and downstream not more than 100 feet from the extent of the work areas. In-channel berms that only deflect water to one side of the channel during sediment removal may be constructed of channel material. The enclosure and the supportive material will be removed when the work is completed and the removal will normally proceed from downstream in an upstream direction. Normal flows will be restored to the affected stream immediately upon completion of work at that location: 1. All water will be discharged in a non-erosive manner (e.g., gravel or vegetated bars, on hay bales, on plastic, on concrete, or in storm drains when equipped with filtering devices, etc.). 2. Sumps or basins may also be used to collect water, where appropriate (e.g., in channels with low flows). 3. Where feasible and appropriate, diversion structures will be installed on concrete sections of the channels or constructed of materials specified above. Earth fill will not be used for cofferdams in non-tidal areas. 4. In conjunction with diversion structures, pumps or gravity-fed pipe systems will be used to dewater sites. 5. Depending on the channel configurations, sediment removal may occur where the flows are not bypassed around the work site; as long as during excavation activities, a berm of sediment is left between the work area and stream flows to minimize water quality impacts. 6. Diversions will maintain ambient stream flows below the diversion, and waters discharged below the project site will not be diminished or degraded by the diversion.
WQ-13 *MINIMIZE HARDSCAPE IN BANK PROTECTION DESIGN*	Bank repair techniques appropriate to a given site based on hydraulic and other site conditions will be selected. Refer to SMP Appendix E, Programmatic Impact Assessment and Mitigation for Routine Bank Protection Activities: 1. Biotechnical repair methods include live construction, willow wattling, erosion control blankets, brush matting, and installation of root wads and boulders in banks. 2. The repair will be designed and installed so that it will be self-sustaining and use vegetation that adds structural integrity to the stream bank.
WQ-14 *SEEDING*	For banks that are scraped, an erosion control seed mix will be used. Temporary earthen access roads will be seeded when site and horticultural conditions are suitable.
WQ-15 *GROUNDWATER MANAGEMENT*	If high levels of groundwater in a work area are encountered, the water will be pumped out of the work site. If necessary to protect water quality, the water will be directed into specifically constructed infiltration basins, into holding ponds, or onto areas with vegetation to remove sediment prior to the water re-entering a receiving water body. Water pumped into vegetated areas will be pumped in a manner that will not create erosion around vegetation.
WQ-16 *AVOID EROSION WHEN RESTORING*	All temporary diversion structures and the supportive material will be removed no longer than 48 hours after work is completed. The removal will normally proceed from downstream in an upstream direction. Normal flows will be restored to the affected stream immediately upon completion of work at that location. Flows will be restored in a manner that minimizes erosion.

FLOWS	1. When diversion structures are removed, to the extent practicable, the ponded flows will be directed into the low-flow channel within the work site to minimize downstream water quality impacts. 2. Flows will gradually be restored to the channel to avoid a surge of water that would cause erosion or scouring. 3. Bypassed flows may be slowly reintroduced into the dewatered area by leaving a silt barrier in place to allow water to slow and drop sediment to the extent possible.
WQ-18 *SITE MAINTENANCE AND CLEANUP*	The work site, areas adjacent to the work site, and access roads will be maintained in an orderly condition, free and clear from debris and discarded materials. Personnel will not sweep, grade, or flush surplus materials, rubbish, debris, or dust into storm drains or waterways. Upon completion of work, all building materials, debris, unused materials, concrete forms, and other construction-related materials will be removed from the work site.
WQ-26 *SILT FENCE CULVERT ENTRANCE PROTECTION*	To reduce flow velocity of runoff, allowing sediment to settle out before discharge enters a culvert and its drainage system: 1. Install silt fence culvert protection in appropriate locations: a. Where sheet and rill erosion would occur. b. Where protection of adjacent property or areas is needed. c. Where the maximum slope length behind the silt fence is 100 feet (30 meters) and the maximum slope gradient is 50% (2:1). d. Where the flow volume does not exceed 1 cfs. e. Where ponded water will not damage adjacent areas or structures, or create a traffic hazard or other nuisance. f. 2. Select the correct construction materials: a. Select a woven or non-woven filter fabric made of at least 85% by weight, ethylene, propylene, amide, ester, or vinylidene yarn. b. The Equivalent Opening size of the filter fabric (U.S. Standard Sieve) will be 70-100, and the tensile strength will be at least 120 lbs (54 kg) if a wire support fence is used and 200 lbs (90 kg) if a wire support fence is not used. c. Posts should be either 4-inch diameter wood or 1.33 pounds per linear foot steel. Posts should be at least 5 feet long. Steel posts should have projections for fastening wire. d. Wire fence reinforcement will be a minimum of 42 in (1.1 m) tall and a minimum width of 14-gauge. The maximum mesh spacing should be 6 in (15 cm). e. 3. Construct the silt fence properly: a. The height of the silt fence should be between 16 in (40 cm) and 36 in (90 cm). The most effective height range is 24 to 36 in (60 to 90 cm). Shorter fences may be breached during small discharges and require more maintenance. b. If possible, cut the filter fabric from a continuous roll to avoid the use of joints. If joints are necessary, splice the filter fabric only at a support post. Overlap the fabric pieces a minimum of 6 in (15 cm) and secure both ends to the post. c. If a wire mesh support fence is used, install posts at least 3 feet (1 meter) apart. Install posts closer together if a support fence is not used. Drive posts into the ground to a depth of at least 1 foot (30 cm). d. Excavate a 4-in (10 cm) deep trench that is at least 4 in (10 cm) wide upslope of the silt fence along the line of posts.

WQ-27 *DISCHARGE SURFACE PROTECTION - ARMORING*	To protect exposed soil and vegetated surfaces from erosion during discharges by placing protective armor (e.g. plastic sheeting, cloth fabric, gravel bedding) over the erodible surface: 1. Select and install armoring materials properly: a. Choose a material whose strength is proportionate to the velocities and materials in the discharged water (e.g. sediment). b. Clear the area to be protected of rocks and debris which may puncture the armor. c. Anchor the armor using sandbags, gravel, or stakes along the perimeter. d. Anchor the armor so it can withstand movement of the discharge. e. Account for potential changes in the flow direction of the discharge when laying the armor. f. If there is to be a direct stream of high velocity flow, an energy dissipating device may be necessary to prevent failure of the armor. 2. Inspection and Maintenance: a. During the discharge, monitor the armor for failure (tearing) and erosion at the edges of the armor. b. If erosion does occur, implement sediment/turbidity control measures. c. Remove armor when the discharge is complete. d. Sweep up any sediment deposited in the flow path and dispose of appropriately. e. Complete the Planned Discharge Activities Checklist and submit it to District staff responsible for Water Utility Discharge Pollution Prevention Plan reporting.
WQ-28 *DISCHARGE SURFACE PROTECTION – FLOW DIVERSION*	To protect bare soil and vegetated surfaces from erosion by diverting, channeling, or temporarily piping flows over erodible areas to protected areas not subject to erosion: 1. When considering the use of flow diversion, take into account the following: a. There must be a storm drain or paved surface nearby to which the discharge can be diverted. b. The flow channel must be aligned to avoid disruption of traffic, or traffic control measures must be used. c. The flow channel must have sufficient slope to allow the discharge to flow to the storm drain or paved surface. d. The flow channel must be designed to handle the anticipated flow rate. e. Protective armor or temporary piping can be used for high velocity discharges or large flow volume discharges over bare soils or vegetated surfaces. The armor material selected must be able to withstand the flow velocity and movement of the discharge. 2. Divert flows correctly: a. Divert water to a channel using fixed or flexible piping, or another system to capture this flow (e.g. sand bags). b. If armor is used to create a flow channel over the erodible surface clear the area to be protected of rocks and debris which may puncture the armor. c. Anchor the armor using sandbags, gravel, or stakes along the perimeter. d. If there is to be a direct stream of high velocity flow, an energy dissipating device may be necessary to prevent failure of the armor. 3. Inspection and Maintenance: a. Inspect the area for flooding resulting from failure of the channel diversion structure or the flow rate exceeding the diversion channel

	capacity. b. Inspect the channel for erosion along the edges due to overtopping of the channel. c. Monitor the armor for failure (tearing) and erosion at the edges of the armor. d. If erosion does occur along the edges of the channel or armor, implement sediment/turbidity control measures. e. Remove armor when the discharge is complete. f. Sweep up any sediment deposited in the flow path and dispose of appropriately. g. Complete the Planned Discharge Activities Checklist and submit it to District staff responsible for Water Utility Discharge Pollution Prevention Plan reporting.
WQ-41 *STORMWATER POLLUTION PREVENTION*	Suitable erosion control, sediment control, source control, treatment control, material management, and non-stormwater management BMPs will be implemented consistent with the latest edition of the California Stormwater Quality Association "Stormwater Best Management Practices Handbook," which is available at www.cabmphandbooks.com.

NOISE

NO-1 *NOISE POLLUTION*	Noise pollution due to construction activities will be kept as low as possible. In no case shall noise levels exceed the maximums of the local jurisdiction requirements.
NO-2 *RESIDENTIAL NOISE MANAGEMENT*	The District will implement practices that minimize disturbances to residential neighborhoods surrounding work sites: 1. In general, work will be conducted during normal working hours. Extending weekday hours and working weekends may be necessary to complete some projects. 2. Internal combustion engines will be equipped with adequate mufflers. 3. Excessive idling of vehicles will be prohibited. 4. All construction equipment will be equipped with manufacture's standard noise control devices. 5. The arrival and departure of trucks hauling material will be limited to the hours of construction. 6. The use of jake brakes is prohibited in residential areas.

TRANSPORTATION/TRAFFIC

TR-1 *IMPLEMENT PUBLIC SAFETY MEASURES*	Public safety measures shall be implemented as follows: 1. Construction signs shall be posted at job sites warning the public of construction work and to exercise caution. 2. When necessary, a trained flagger shall be provided for traffic control. 3. If needed, a lane shall be blocked off in accordance with applicable agency recommendations and approval to allow for trucks to pull into and out of the access points. 4. Where work is proposed adjacent to a recreational trail, warning signs shall be posted several feet beyond the limits of work. 5. Fencing, either the orange safety type or chain-link, shall be installed around project areas to keep the public out as necessary.

UTILITIES

UT-1 *SANITARY/SEPTIC WASTE MANAGEMENT*	Temporary sanitary facilities shall be located on jobs that last multiple days. All temporary sanitary facilities shall be placed outside of the creek channel and flood plain and removed when no longer necessary.
UT-2 *WORK SITE SOLID WASTE MANAGEMENT*	Field personnel shall clean the work site before leaving by removing all litter and construction related materials. Field personnel shall be responsible for all debris incurred as a result of construction and for cleaning up dumped material.

ATTACHMENT B

Biological Resources and Wetland Assessment
Upper Guadalupe River, Reach 6, Upper Guadalupe River Flood Protection Project, San Jose, Santa Clara County, California.

January 23, 2009